REMARKS

This application has been amended in a manner that is believed to place it in condition for allowance at the time of the next Official Action.

Claims 1-8 and 17-28 are pending in the present application. Claims 1-8 remain unchanged. New claims 17-28 have been added. Support for new claims 17-28 may be found in the original claims and generally throughout the present specification. In particular, the Examiner's attention is respectfully directed to page 2, line 11, to page 3, line 4; page 10, lines 10-25; and page 8, line 8 to page 9, line 16.

In the outstanding Official Action, claims 1-9 were rejected under 35 USC §112, second paragraph, for allegedly being indefinite. This rejection is respectfully traversed.

In imposing the rejection, the Official Action stated that it was unclear how a complex can be formed between an entire tissue extract in a particle. However, applicants respectfully note that it is stated in the present application that the invention relates to a molecular complex composed by a tissue extract containing at least one known component and unknown components, and a molecular vector comprising a particle bearing at least two molecules (polypeptides and/or sugars) able to recognize at least one known component of the tissue extract and at least one phagocytic receptor of monocytes-derived cells.

Among the polypeptides and/or sugars borne by the particle, at least one specifically recognizes a known component of the tissue extract, whereas the others recognize known and/or unknown components. Consequently, applicant agrees with Examiner's statement that a molecular complex such as claimed in the present application is not formed between "an entire tissue extract" and a particle. Rather, the molecular complex of the invention involves two or more components of said tissue extract, among which at least one is known, and a particle. The more polypeptides and sugars the particle bears, the more components of the tissue extract will be complexed with the particle, but on no account does the present application imply that each and every component of a given tissue extract will be complexed with the particle. Applicants believe that this would also be clear to one skilled in the art.

Therefore, applicants believe that the claims are definite to one skilled in the art.

Claims 1-9 were also rejected under 35 USC §112, first paragraph, for allegedly not satisfying the written description requirement. This rejection is respectfully traversed.

Applicants believe that the present disclosure satisfies the written description requirement. Indeed, the "known components" are *inter alia* disclosed on page 2, lines 11-13 and encompass "*identified tissue antigens, polylpeptides or oligosaccharides or an hapten expressed or transfected on the*

cell membrane of tissues or tumors". As noted by the Official Action, a particular set of tumor antigens are more specifically disclosed on page 4 as possible "known components".

Indeed, one of the preferred embodiments of the invention involves tumor tissue extract (Example 1). However, these known components may vary according to the particular type of tissue and each species of interest.

Applicants respectfully submit that a skilled person would be able to put together a list of particular components from a given tissue extract that would be considered as "known components" defined from above. In other words, the implementation of the molecular complex of the invention with other types of known components would involve only minor adjustments by one skilled in the art. The "known components" of the instant claims are thus believed to be sufficiently described in the present application.

As to the "unknown components", they are described on page 2 as *"proteins and saccharides present in cellular extracts of tumors or tissues (lysates, apoptotic extracts)".* It would therefore be clear to those skilled in the art that such "unknown components" represent non-tagged potential parts of a tissue originating from the potential organs of a human or animal body. They may be macroscopic fragments such as cells, fragments of membranes, lysates or apoptotic bodies, or smaller fragments such as proteins, peptides, glucidic structures.

The phrase "phagocytic receptor of monocytes-derived cells" is described on page 2 as being such that *"when interacting with a ligand, in this case, the molecular complex, it initiates the uptake of said ligand"*. Phagocytic receptors of monocytes-derived cells as well as their ligands are well known by a person of ordinary skill in the art. In particular these phagocytic receptors may be mannose receptors, receptors for oligosaccharides or Fc receptors, as exemplified in claim 2. Consequently, the ligands in question may be mannose or mannosyl residues, oligosacchardes residues or agonists for Fc receptors.

Therefore, applicants believe that a sufficient number of species of all three components of the molecular complex of the present invention are disclosed by the present application, and that all components are described so that one skilled in the art would be understand that the applicants were in possession of the claimed invention at the time the application was filed.

Applicants also believe that the molecular vector is well defined and exemplified in the disclosure. In example 1, the molecular vector comprises a microparticle bearing annexin V polypeptides and mannosyl residues; annexin V is able to bind to phosphatidyl serine residues expressed on apoptotic bodies, which comprise the tissue extract. Mannosyl residues are able to bind to mannose receptors or oligosaccharides receptors expressed by antigen-presenting cells. The at least one known component is therefore the apoptotic bodies with their phosphatidyl serine

residues. The unknown components are the "*multiple melanoma tumor antigens other than the targeted antigen*" mentioned on page 8, lines 25-26. It is believed that these unknown components are part of the molecular complex because a global antitumoral effect is observed in the patients who received injections of the molecular complex, which involves a specific immune response and therefore the presence of the above-mentioned unknown components.

As to example 2, the microparticles presenting mannosyl residues represent the molecular vector. As to "known component", applicants note that example 2 is directed to hepatocytes. While the present disclosure exemplifies a variety of tissue extracts, nowhere in the specification are hepatocytes excluded. Moreover, the example states that the macrophages are grown in the presence of molecular complexes. As to the macrophages grown in the presence of the molecular complexes, the macrophages have gained a particular tissue specificity.

Thus, in view of the above, applicants believe that the present disclosure satisfies the written description requirement.

Claims 1-8 were rejected under 35 USC §112, first paragraph, for allegedly not satisfying the enablement requirement.

It is respectfully submitted that the molecular complexes of the claims are sufficiently described. Furthermore, sufficient guidance is thought to be provided to the skilled artisan who would want to make the invention. For instance, four

different cases concerning the molecular vector of the molecular complex are listed on page 3. This vector can comprise:

- two polypeptides, one of them recognizing a known component of the tissue extract and the other recognizing a phagocytic receptor, or

- two sugars, one of them recognizing a known component of the tissue extract and the other recognizing a phagocytic receptor, or

- one polypeptide recognizing a known component of the tissue extract and one sugar recognizing a phagocytic receptor, or

- one sugar recognizing a known component of the tissue extract and one polypeptide recognizing a phagocytic receptor.

In addition, applicants respectfully note that examples of all the components of the molecular complexes of the invention are described in the present application, as stated above. For instance, Example 1 shows that a molecular complex according to the claimed invention that exhibits a therapeutic effect can be experimentally obtained. Therefore, it is respectfully submitted that the amount of experimentation required by the methods of the invention would not be undue and that the level of unpredictability in the art is not found to be higher than any other biomedical application.

At this time, the Examiner's attention is also respectfully directed to new claims 17-28. New claims 17-28 have

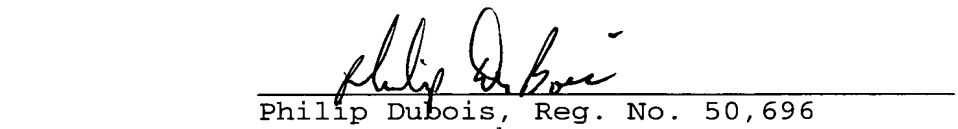
been drafted in a manner so as to further characterize the "known components" of the claimed invention. Furthermore, claims 17-28 recite that the molecular complex comprises a mixture of proteins and saccharides in cellular extracts of tumors or tissues. In particular, claims 26-28 are based on the examples in that the "known component" is directed to hepatocytes and apoptotic bodies. Thus, applicants respectfully submit that claims 17-28 have been drafted in a manner so as to obviate the rejection.

Thus, in view of the above, applicants believe that the present application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



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